

GEO~MEETDIENST



INTRODUCTION

In this brochure we wish to give you an introduction to the Geo-Meetdienst bv., a firm specialized in surveying.

Because of the increased prices and scarcity of land, there is more need for landsurveying. Our activities comprise of, for example, the surveying of land in order to provide maps for future planning and so forth, and also to provide the calculations for setting out. In conjunction with situation surveying; levelling, sectional and cross - sectional measuring, precision levelling, fathoming and settling control are among our activities. In order to carry out these functions, the Geo-Meetdienst uses modern apparatus and systems. Years of experience, plus the professionalism of approximately 100 specialized employees gives

you the security of perfectly carried out orders at favourable prices.

We work for authorities, commerce and industry, both nationally and internationally. We are completely flexible, no matter what the size or the extent of the operation is. Small operations are just as equally carried out as larger, more complex projects. It is just as possible to contract work at set 'all-in' daily - rates as one at a previously agreed contract - rate. A list of rates is enclosed. We would be most willing to give you a personal detailed account of the many ways in which we can be of service.

G.C. Klamer
Director





GEO-MEETDIENST AND...

The Geo-Meetdienst and the Provincial Authorities

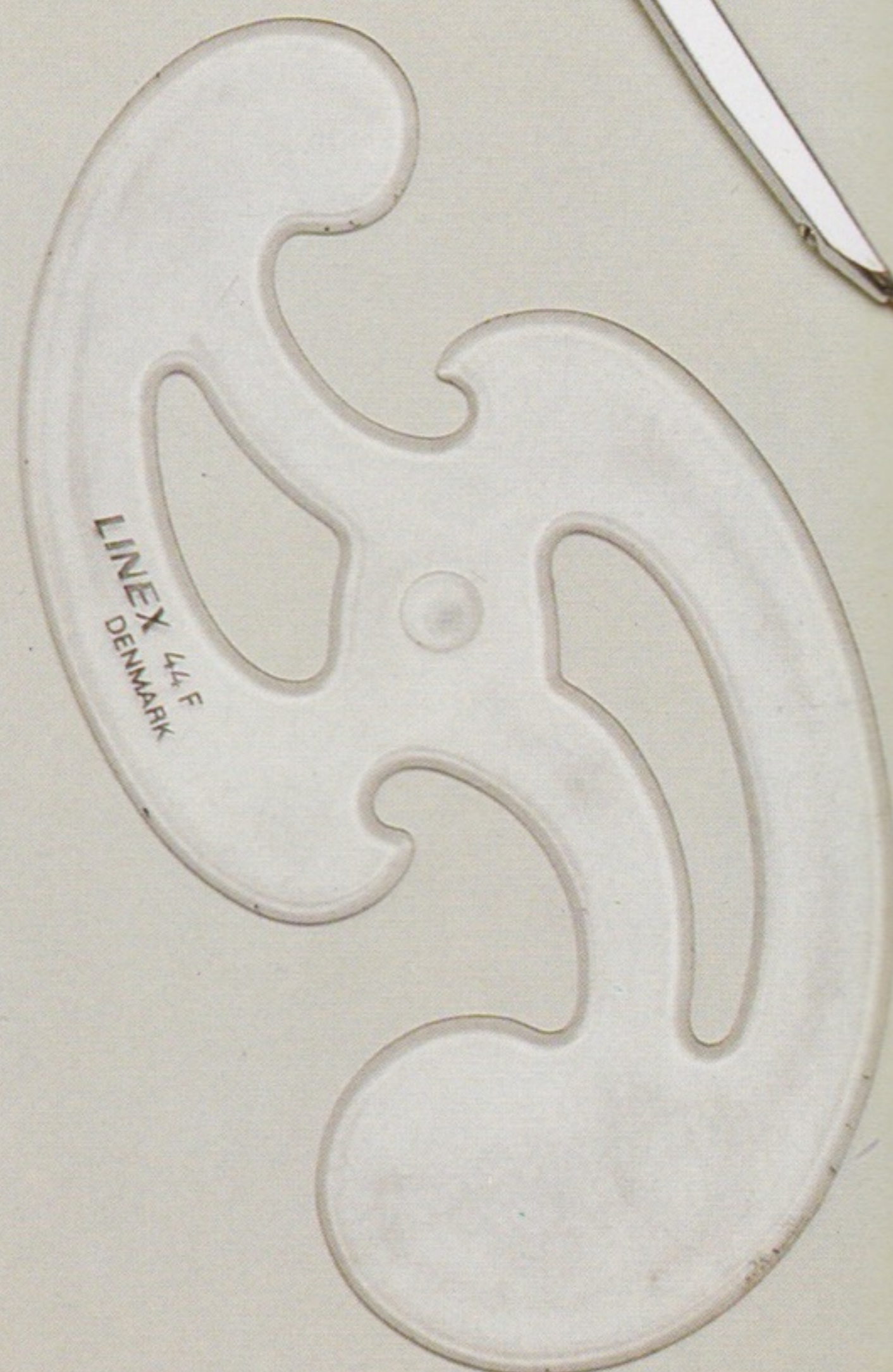
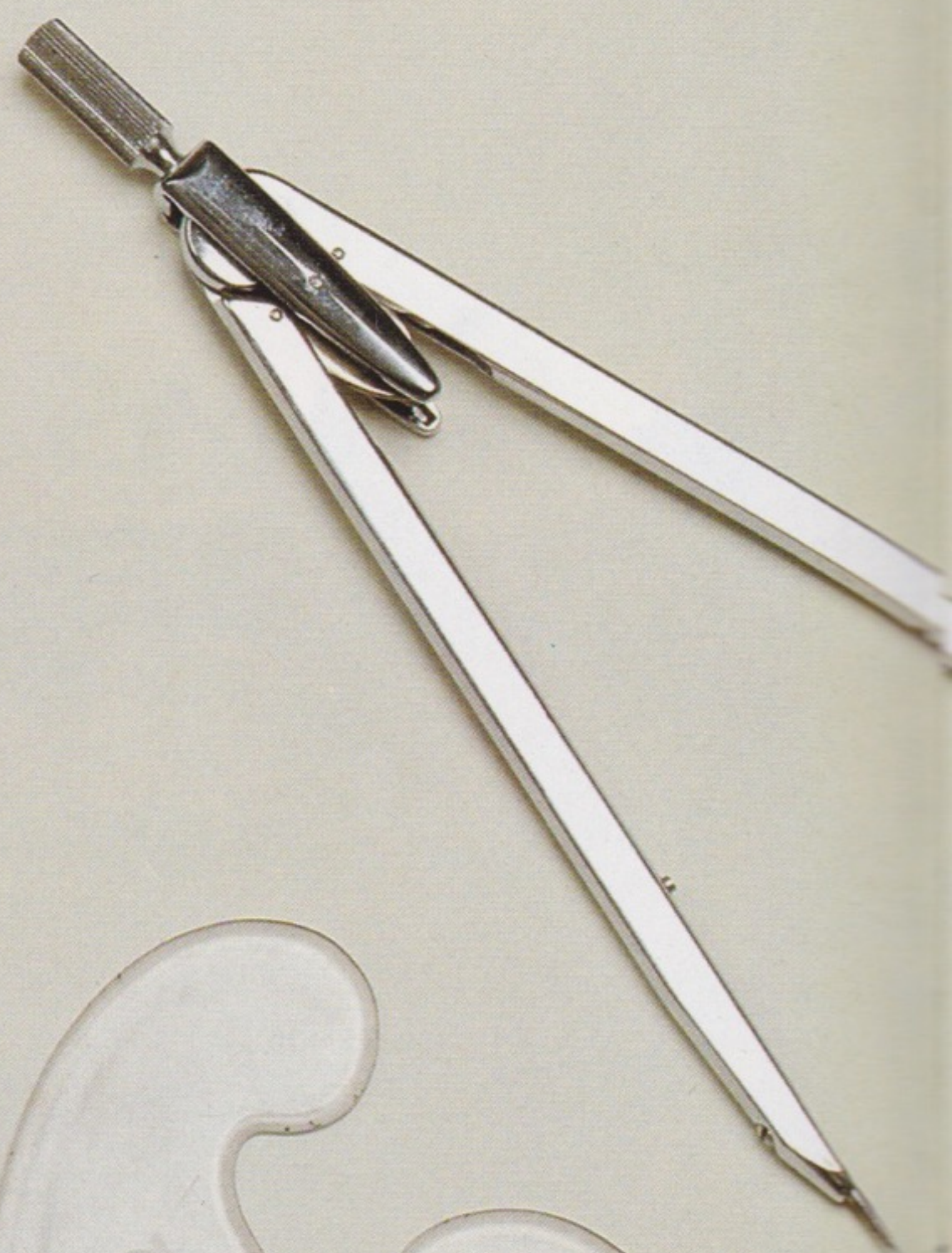
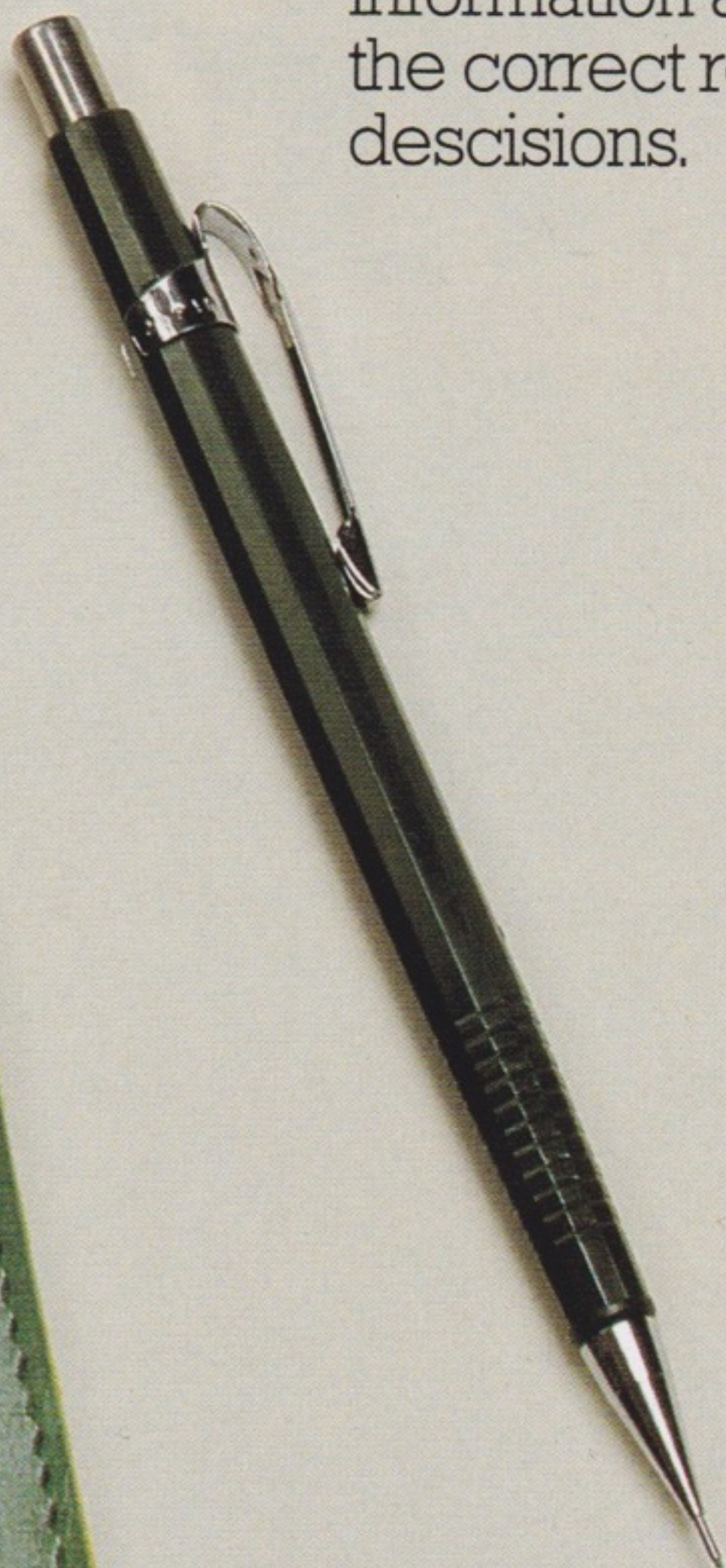
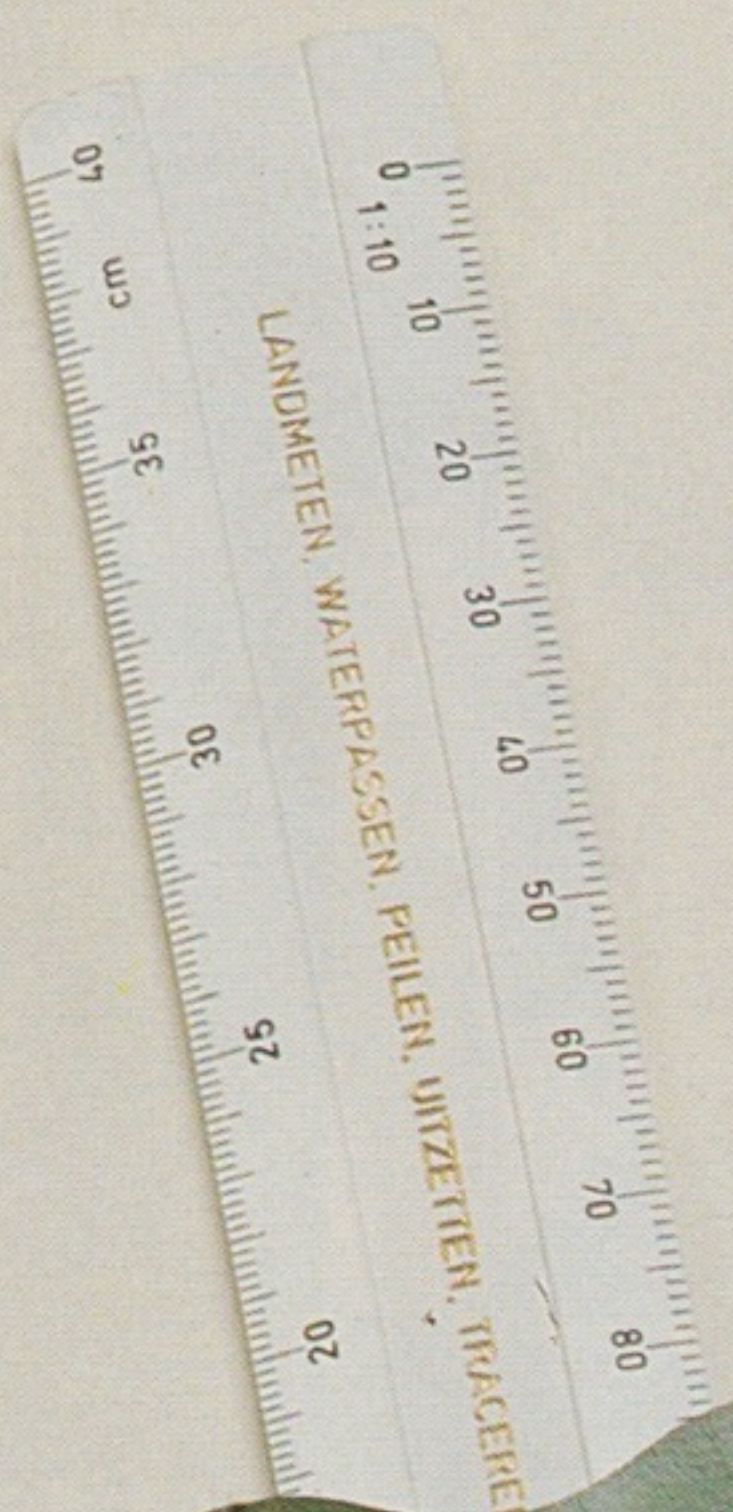
The Geo-Meetdienst also works for several Provincial Authorities. In most cases it concerns revision drawings of provincial roads on a scale of 1 : 500 and on-site measuring for the carrying out of new projects. For provincial and municipal utility companies, the Geo-Meetdienst measures service pipes and cables which are then included on base-maps.

Geo-Meetdienst and the Local Authorities.

At present, the Geo-Meetdienst is working for approximately 100 local authorities throughout Holland, mainly because these councils do not have the time or employees, and the funds available for the necessary equipment to carry out intensive surveying. In most cases the Geo-Meetdienst performs a surveying service for the Public Works Departments, attending to situation maps, which form a basis for town - planning projects, measurement plans, on which new projects are developed, management maps to provide all information required for the management and maintenance of pavements, sewage, vegetation, conduits, streetfurniture, etc. Existing districts and situations are surveyed by the Geo-Meetdienst and then represented on scale maps, thus the local authorities have the correct information available to make the correct regulations and descisions.

The Geo-Meetdienst and the Land Registry

Extra - ordinary services are rendered to the Land Registry offices by the Geo-Meetdienst, including administration. The fact that the Geo-Meetdienst receives contracts from such an important body as the Land Registry goes to show their appraisal for our manner of working.



GEO-MEETDIENST AND...

The Geo-Meetdienst and the Construction Industry

For Engineers, Architects, Contractors and Road Constructors, the Geo-Meetdienst takes care of the exact positioning in development plans. Different measurements are calculated and drawn onto plans, which are then set out on site. This includes the positioning of roads, interchanges, sewage systems, cables and conduits, viaducts, waterways, ports, etc. Also we set out and control measurements of foundations.

The Geo-Meetdienst and the Government Agencies.

For the Departments of Traffic, Buildings and Roads, the Geo-Meetdienst conducts controls of level bench-marks in Holland. In the Wieringermeerpolder, the Geo-Meetdienst conducts superficial measurements in order to establish settling of the land. The Geo-Meetdienst also provides surveying teams for the Government Agencies for functions in the IJsselmeerpolders. These teams are mainly equipped with electronic-tacheometers, laser-instruments and NAP beacons. For the Cultural Services, the Geo-Meetdienst has carried out levelling of several areas of reallocated land.

The Geo-Meetdienst and Industry

The exact horizontal and vertical erection of installations is of the greatest importance. The majority of machines and installations can only function correctly when they are perfectly horizontal or vertical. The Geo-Meetdienst makes exact installation possible with the Electrolevel. An instrument with an accuracy of 1 mm in 10 metres, used for the installation of machines, turbines, liftshafts and drilling platforms.



EXAMPLES OF PROJECTS



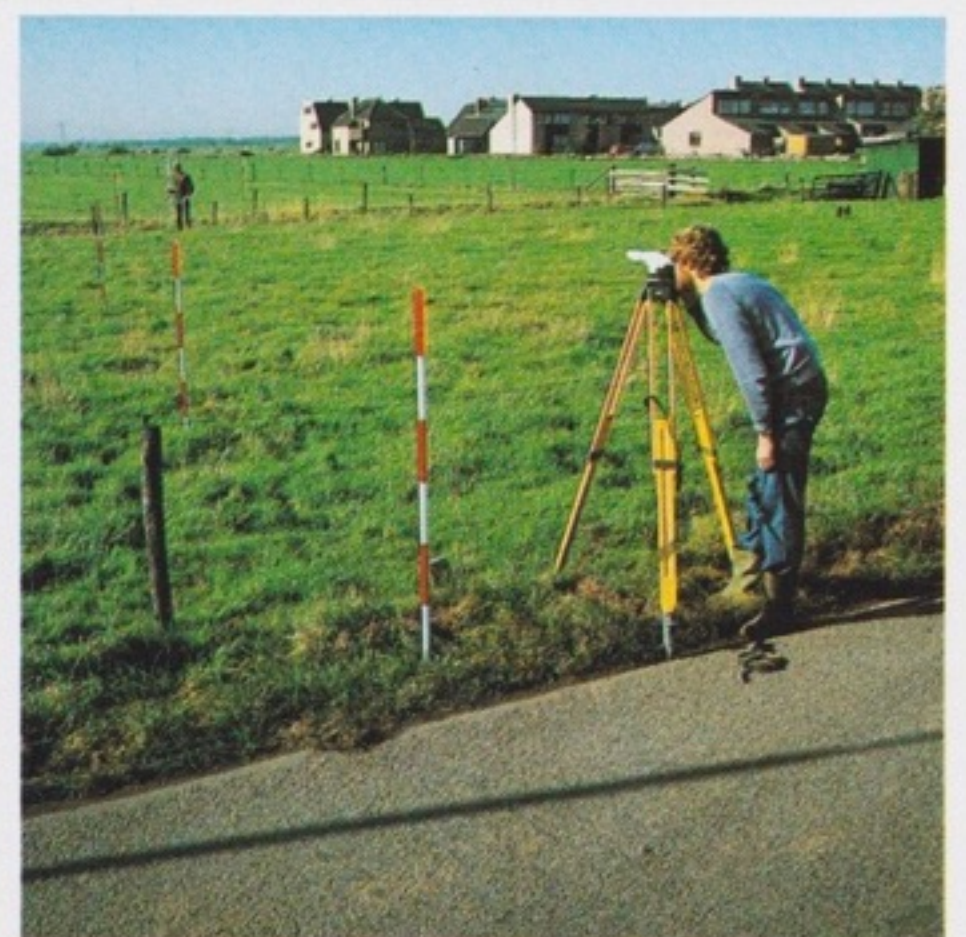
Measuring on behalf of house construction projects in: Leusden, Lelystad, Almere, Emmeloord, Utrecht, Houten, Kampen.



Setting out and surveying for the construction of viaducts and motorways, e.g. motorways Amsterdam-Hoevelaken and Utrecht-Lelystad. Also by-passes at Hengelo, Almelo, Emmen and Groningen.



EXAMPLES OF PROJECTS



Surveying and setting out Athletics tracks in Hengelo and Veenendaal; Horse-racing track in Schaesberg; Sport complexes and recreation facilities in several towns.



INSTRUMENTS FOR IN THE FIELD

Automatic levels

Used because of their quick and easy operation and high level of accuracy.

Theodolites

Trustworthy instruments for measuring of angles and for setting out directions.



INSTRUMENTS FOR IN THE FIELD

Rotating laser

Makes quick levelling and height measurements possible, with only one operator necessary; this can also be used to make directions visible.

Electronic Tacheometers

Instruments for angle and distance situation measuring. The self registering kind has the advantage that recordings can be directly fed into the computer for further automatic use.



THE GEO-MEETDIENST

Because of the introduction of automation, the Geo-Meetdienst is now a leader in the field of surveying.

On all tacheometric readings are given calculation and drawing codes in the field.

All measurements and readings can, when a self registering tacheometer is used, be fed directly into the computer.

When a non - registering tacheometer is used, the readings are given on a form, which can be typed into the computer terminal by an operator.

A digitizer, coupled with a computer with a graphical display is used for superficial fixing and the digitalization of maps.



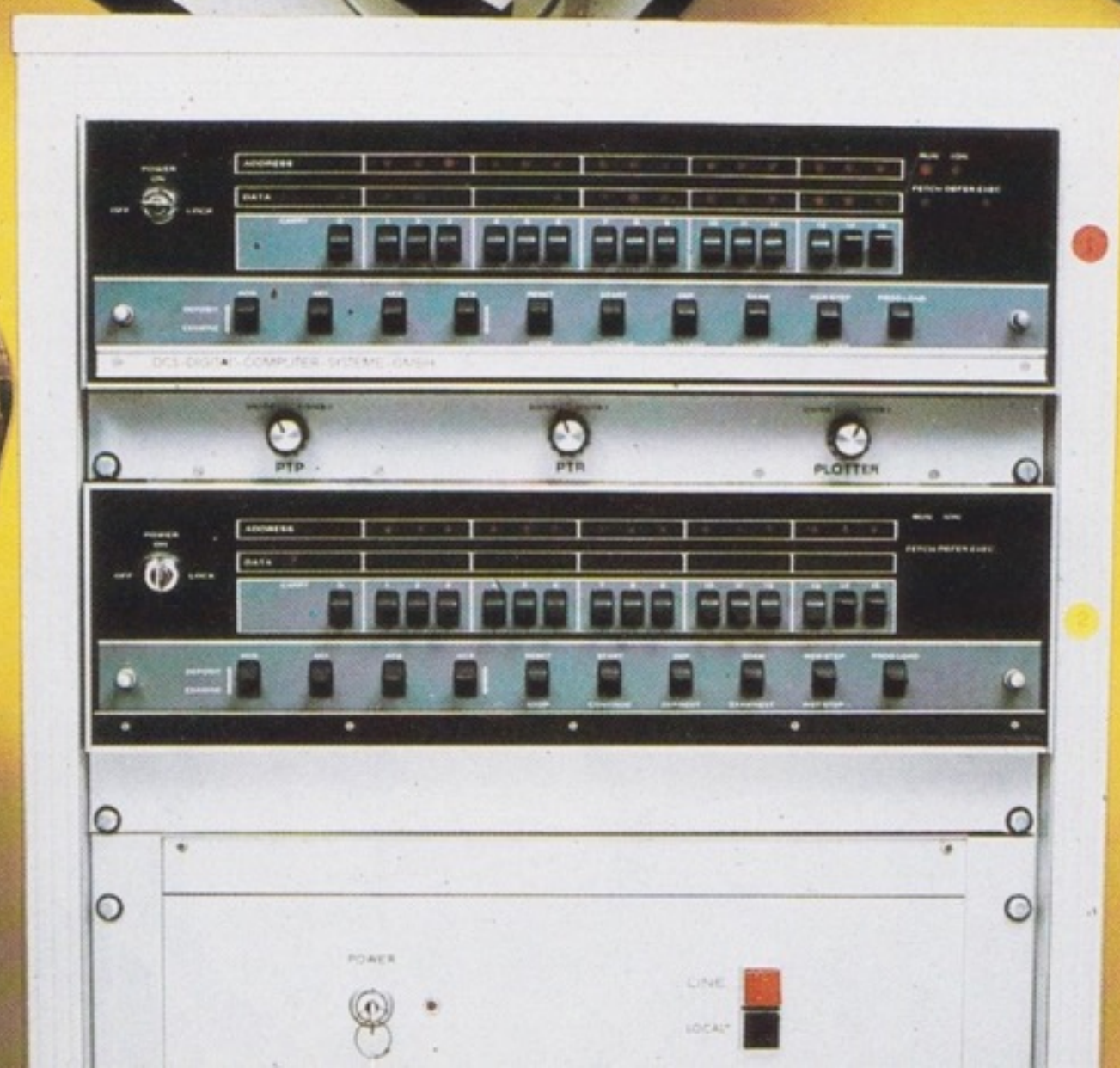
AND AUTOMATION

The computer calculates the readings until the co-ordinates and drawing codes are given as drawing instructions to the drawing table.

The electronically operated drawing table alone produces the drawings automatically at the desired scale and size.

Result: Maximum precision in minimum time.

The electronically operated drawing table is limited to 117 cm x 98 cm, big enough for all current sizes.



THE GEO-MEETDIENST PROVIDES

Situation map

The reliable base when preparing, designing and planning roads, zone plans, waterways and art objects.

Data map

All houses that must be set out, sewage systems, roads, pipes and cables, footpaths, stop-taps etc. are given exactly on the data plan.

Base map

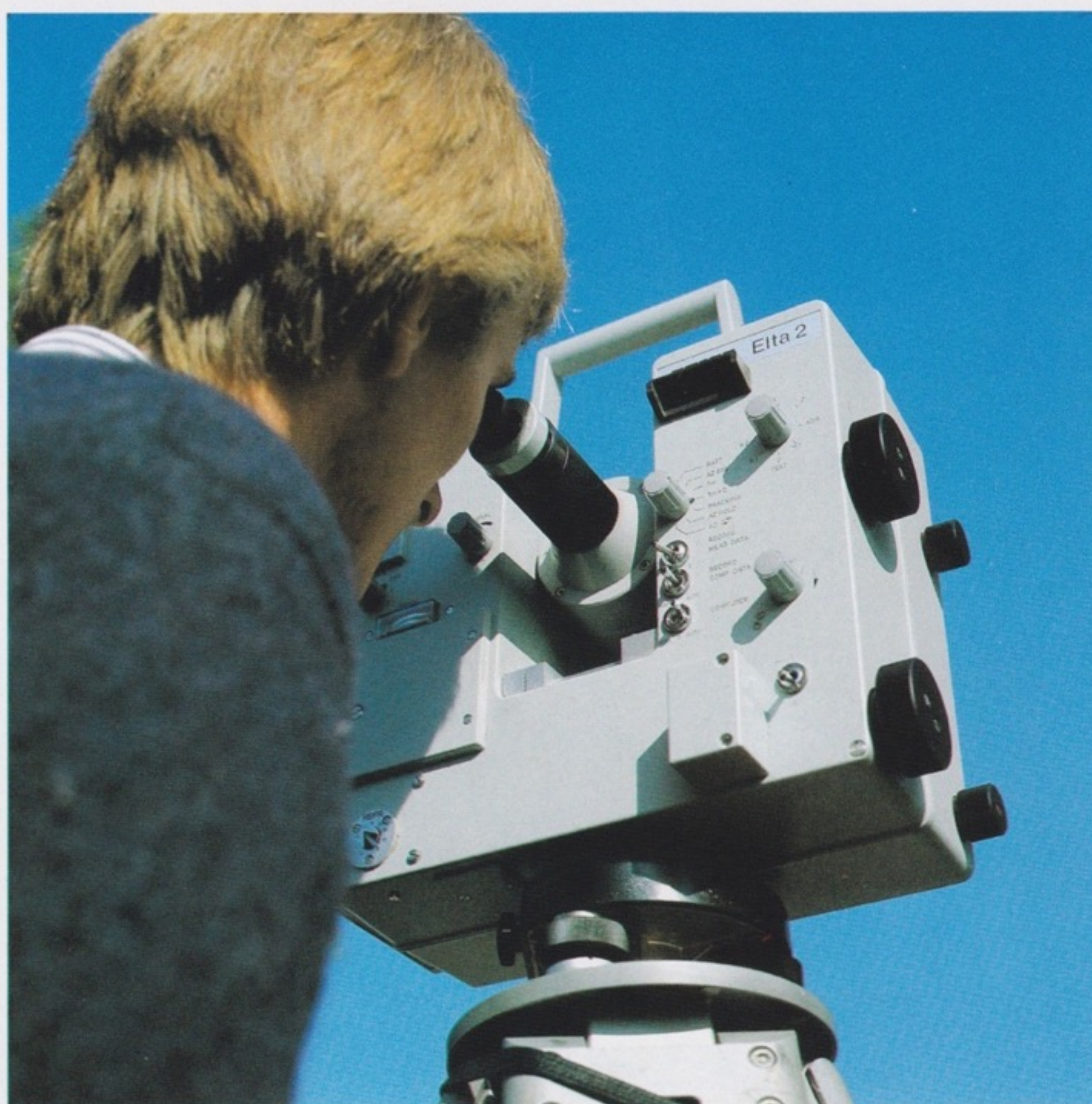
Map, serving as base for several uses.



HOW DOES GEO-MEETDIENST WORK?



The employees live throughout the whole of Holland, therefore a contracts are possible in every area.



The availability of modern apparatus and workmanship guarantees a smooth handling of all situations.



HOW DOES GEO-MEETDIENST WORK?



Precision is one of the first requirements in the practice of surveying.



New developments in surveying are always being followed up, ensuring that instruments are always up to date, therefore remaining quick and effective.

COMPUTERSERVICE

The automation of measurement and drawing is a big investment. Smaller surveying services e.g. local councils have the ability to obtain electronic tacheometer, but they don't have the possibility for full automation.

Another service of the Geo-Meetdienst is the possibility to loan computer time plus the knowledge of our specialized employees, where without great expense you have the availability of automation in surveying.

By using the code-systems shown below it is possible to calculate with the computer and make use of the drawing table with no further problems.

"Opnamecodes"

CODE	CORRECTIE	TEKENCODE	PUNTNR.	
A B C D E F G H I J K L				CODERING TACHYMETER - OPNAMEN
1 0		0 5 0 7 7 9		datum
1 1	2 0		9 0	instrumentnummer, optelconstante
1 3	0		3 7 6	veldwerknnummer
1 5	0		2 1 4	standplaats
1 6	0		2 1 8	standplaats (te berekenen meetpunt)
2 0	0		0	meting optelconstante
2 3	0		0	meting indexfout vert. rand
3 0	0	1 2 4 1		verre richting
3 1	1 6	1 2 4 1		verre richting met L correctie
3 2	4 3	1 2 4 1		verre richting met R correctie
3 3	8	1 2 4 1		verre richting met + correctie
3 4	6	1 2 4 1		verre richting met - correctie
3 5	0	1 2 4 1		verre richting met +1000 m. correctie
3 6	0	1 2 4 1		verre richting controle-meting
3 8	2 0 0	1 1 6		meting hoogtemerk
6 0	0 T C	1 8		meting detailpunt
6 1	1 2 5 T C	1 8		meting detailpunt met L correctie
6 2	1 2 T C	1 8		meting detailpunt met R correctie
6 3	5 T C	1 8		meting detailpunt met + correctie
6 4	8 T C	1 8		meting detailpunt met - correctie
6 5	0 T C	1 8		meting detailpunt met + 1000 m. correctie
7 0	0 T C	6		tekenkop terug naar eerder opgenomen punt
7 1	3 2 5 T C	2 2		bijmeting haaks linksom
7 2	5 5 6 T C	2 2		bijmeting haaks rechtsom
7 3	4 1 6 T C	2 2		doormeting
7 4	2 0 5 T C	2 2		terugmeting
8 0	2 0 0 T C	6 3		meting detailpunt met hoogte
8 5	1 5 0 T C	6 4		idem, afstand + 1000 m.
9 1	0	0		verwijderen van laatste registratie
9 2	0	0		verwijderen van laatste twee registraties
9 8	0	0		verwijderen van laatste acht registraties
9 9	0	0		einde veldwerk einde standplaats einde reken-unit max. 450 regels

TEKENCODES			
CODE	OMSCHRIJVING	SIGNATUUR	CODE
0	rondje met puntnummer	○ 23	0
1	volle lijn	—	1
2	stippellijn - grof	---	2
3	stippellijn - fijn	...	3
4	raster-lijn	+	4
5	haag-lijn	x	5
9	met 'pen-omhoog' naar dit punt		9
11	volle lijn met eindstreepje	—	11
12	stippellijn-grof met eindstreepje	---	12
13	stippellijn-fijn met eindstreepje	...	13
14	raster-lijn met eindstreepje	+	14
15	haag-lijn met eindstreepje	x	15
20	tusspunt cirkelboog	20	20
21	eindpunt cirkelboog	21	21
30	vierkantje	□	30
31	kolk, links van de lijn	· K	31
32	kolk, rechts van de lijn	K ·	32
34	vierkantje met puntnummer	□ 32	34
35	vierkantje, dat rechtsom wordt getekend	◇	35
40	grensbuis	○ GR	40
41	ijzeren buis	○ BS	41
45	paal	○ PL	45
46	stalen paal	○ ST	46
47	houten paal	○ HT	47
48	betonnen paal	○ BT	48
50	lantaarnpaal	○ LP	50
51	hectometerpaal	○ HMP	51
52	kilometerpaal	○ KMP	52
53	meerpaal	○ MP	53
55	laagspanningspaal	○ LSP	55
56	hoogspanningspaal	○ HSM	56
58	vlaggestok	○ VS	58
60	boom	●	60
61	vruchtboom	●	61
62	bomenrij	●	62
65	waterput	○ H	65
66	brandkraan	○ BK	66
67	olie - benzine put	○ OL	67
68	gasput	○ G	68
70	aanduidingsbord	○ AB	70
71	verkeerszuil	○ VZ	71
72	verkeerslicht	○ VL	72
73	parkeermeter	○ PM	73
74	verklipper p.t.t.	○ PTT	74
75	verklipper algemeen	○ V	75
76	kabel of zinkerbord	○ KB	76
80	riool - inspectieput	○ R	80
81	kolk	○ K	81
90	bijzondere signatuur	X	90
91	bijzondere signatuur	△	91
92	bijzondere signatuur	⊗	92
93	bijzondere signatuur	⊕	93
94	bijzondere signatuur	⊗	94

MEASURES, CALCULATES, DRAWS FOR:

Government road and waterways Agency:	Precision levelling
Government Agency for the IJsselmeerpolders:	Every form of surveying
Land Registry:	Large scale base maps, boundaries surveying
Government Agency of Archeology:	Measuring of archeological sites
Provincial Road and waterways Department:	Surveying Management maps etc. measuring for new projects
Local Authorities:	Every form of surveying for ± 100 Local Authorities Duiven, Maasbracht, Hoom, Huizen, Helmond, Leusden, Baam, Roden, Ferwerderadeel, Appingedam, Hasselt, Ommen, Ootmarsum, Nijkerk, Bunschoten, Zevenhuizen, Wijk bij Duurstede, Wassenaar, Goes, Middelhamis, Beuningen, Lelystad, Almere, etc.
Engineers and Surveying of Architects:	Recreation facilities, reallocation plans industrial estates etc.
Road Engineers:	Setting out roads, waterways, drainage, canals, viaducts, tunnels, ports, airfields etc.
Building Contractors:	Complete surveying for housing and commercial projects until foundation stages
Utility Companies:	Surveying for and setting out of high tension cables, setting out cables and pipelines and producing revision maps
Water Authorities:	Surveying and setting out waterways
International:	Projects in: Saudi-Arabia, France, Belgium, Germany, Yugoslavia, Egypt, Kuwait, England, Aruba.

AT YOUR SERVICE: GEO-MEETDIENST

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telefoon: 05920 - 13400

Dutch Antillies office:

Antillen Meetdienst
Schumannstraat 7
Oranjestad
ARUBA

**Management of the
Geo-Meetdienst:**

Managing Director, G.C. Klamer
Manager, Ing. G. Wijnen
Advisor, Ir. S. Rienstra